## Abstract of the Disclosure:

A process and a bioreactor for the manufacturing of three-dimensional, vital and mechanically-resistant cell cultures that can be cultivated and stimulated within a short time of each other or simultaneously. The bioreactor has a basic body connected to a reactor lock so that it is pressure proof and sterile, this creating at least one reactor chamber, a storage space for a transplant and a mini actuator being implemented in this. The bioreactor is also equipped with at least two hose coupling connections for the feeding and discharging of the medium in addition to the gassing. The system enables GMP-conform transplant cultivation under guaranteed sterile conditions, of three-dimensional, vital and mechanically-resistant cell cultures, preferably cartilage-cell constructs which can hereby be cultivated and stimulated in a locked mini-bioreactor simultaneously, consecutively or within a time-controlled process according to GMP guidelines. These so-called transplants which are cultivated in this manner are then available as replacement tissue material for the therapy of connective and supporting tissue defects, direct joint traumas, rheumatism and degenerative joint disease, for example and can present an alternative to the conventional therapy approaches, such as micro fracturing or drill perforation in arthrosis of the knee joint, for example.